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## Claims

What is claimed is:

1. A muzzle stabilizer for a repeating firearm comprising:  
a tubular body comprising two or more gas vents disposed at non-parallel angles;  
an attachment flange connected to a first end of the tubular body, the attachment flange having a coupler adapted to mate with a corresponding coupler on the end of the muzzle of the firearm;  
a gas regulator threadedly engaged with a second end of the tubular body such that rotation of the gas regulator adjusts the venting of gas through at least one of the gas vents, the threaded engagement of the gas regulator and tubular body comprising a thread pattern of 24 or more threads per inch.
2. The muzzle stabilizer of claim 1 further comprising a multistage expansion chamber.
3. The muzzle stabilizer of claim 2 wherein the tubular body and attachment flange have different internal diameters, the internal diameter of the attachment flange defining a first expansion chamber stage and the internal diameter of the tubular body defining a second expansion chamber stage.
4. The muzzle stabilizer of claim 1 wherein the gas vents comprise a plurality of ninety-degree vents, the sizes of the ninety-degree vents being graduated.
5. The muzzle stabilizer of claim 4 wherein the gas vents further comprise a thirty-degree vent, wherein a decrease in gas venting through the ninety-degree vents corresponds with an increase in venting through the thirty-degree vent.
6. The muzzle stabilizer of claim 1 further comprising a spring indent biased into the interior of the tubular body, wherein the gas regulator comprises six or more circumferentially arranged index grooves for incrementally engaging the spring indent.
7. The muzzle stabilizer of claim 6 wherein the threaded engagement of the gas regulator and tubular body comprises a thread pattern of 28 or more threads per inch.
8. A muzzle stabilizer adapted to be attached to the end of a repeating firearm muzzle, the muzzle stabilizer comprising:  
a tubular body having an inner diameter and a plurality of gas vents disposed in the tubular body;

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an attachment flange connected to a first end of the tubular body, the attachment flange having a coupler corresponding with a coupler on the end of the muzzle and an inner diameter different from that of the tubular body;

the inner diameter of the attachment flange defining a first expansion chamber stage and the inner diameter of the tubular body defining a second expansion chamber stage, wherein gas produced during discharge of a projectile will expand as it travels from the muzzle through the first and second stages; and

a gas regulator adjustably engaged with a second end of the tubular body for regulating the venting of gas through at least one of the gas vents.

9. The muzzle stabilizer of claim 8 wherein the attachment flange is detachable from the tubular body.

10. The muzzle stabilizer of claim 8 wherein the attachment flange is formed of unitary construction with the tubular body.

11. The muzzle stabilizer of claim 8 wherein the inner diameter of the tubular body is more than ten percent greater than the inner diameter of the attachment flange.

12. The muzzle stabilizer of claim 8 wherein the gas vents comprise a plurality of openings of graduated sizes radially arranged about the tubular body.

13. The muzzle stabilizer of claim 8 wherein the gas regulator is threadedly engaged with a second end of the tubular body with a thread pattern of greater than 24 threads per inch.

14. A muzzle stabilizer adapted to be attached to the end of a repeating firearm muzzle, the muzzle stabilizer comprising:

a tubular body comprising gas vents of graduated sizes radially arranged about the tubular body;

an attachment flange at a first end of the tubular body, the attachment flange having a coupler adapted to mate with a corresponding coupler on the end of the muzzle;

a gas regulator threadedly engaged with a second end of the tubular body such that rotation of the gas regulator adjusts the venting of gas through at least one of the gas vents.

15. The muzzle stabilizer of claim 14 wherein the radially arranged gas vents are disposed at an angle of ninety degrees with respect to the longitudinal axis of the tubular body.

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16. The muzzle stabilizer of claim 15 wherein the tubular body further comprises a gas vent disposed at an angle of thirty degrees with respect to the longitudinal axis of the tubular body.

17. The muzzle stabilizer of claim 14 wherein the attachment flange is removably attached to the tubular body.

18. The muzzle stabilizer of claim 14 wherein the tubular body the tubular body and attachment flange have different internal diameters, the internal diameter of the attachment flange defining a first expansion chamber stage and the internal diameter of the tubular body defining a second expansion chamber stage.

19. The muzzle stabilizer of claim 14 further comprising a multistage expansion chamber.

20. A muzzle stabilizer kit comprising:  
a muzzle stabilizer for a repeating firearm, the muzzle stabilizer comprising  
a tubular body comprising two or more gas vents,  
an attachment flange connected to a first end of the tubular body, the attachment flange having an adjustment surface and a coupler adapted to mate with a corresponding coupler on the end of the muzzle of the firearm, and  
a gas regulator threadedly engaged with a second end of the tubular body, the gas regulator having a driving surface for effecting rotation of the gas regulator relative to the tubular body, said rotation adjusting the venting of gas through at least one of the gas vents;  
and  
an adjusting tool comprising a rotational adjustment surface adapted to engage the adjustment surface of the attachment flange and a gas regulator adjusting surface adapted to engage the driving surface of the gas regulator.

21. The kit of claim 20 wherein the muzzle stabilizer further comprises a multistage expansion chamber.

22. The kit of claim 20 wherein the gas vents comprise a plurality of vents of graduated sizes radially arranged about the tubular body.

23. The kit of claim 22 wherein the radially arranged gas vents are disposed at a ninety degree angle from the longitudinal axis of the tubular body and the tubular body further comprises a gas vent disposed at thirty-degrees from the longitudinal axis.

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24. The kit of claim 20 wherein the attachment flange is removably attached to the tubular body.

25. A muzzle stabilizer adapted to be attached to the end of a repeating firearm muzzle, the muzzle stabilizer comprising:

a tubular body;

an attachment flange at a first end of the tubular body having a coupler adapted to attach to the end of the muzzle;

a gas regulator at a second end of the tubular body;

two or more gas vents disposed at different angles through the tubular body proximate the gas regulator;

a multistage expansion chamber having stages that increase in diameter from the attachment flange to the gas regulator, in which gas produced during discharge of a projectile will continuously expand as it passes from the muzzle through the stages of the expansion chamber; and

means for adjusting the gas regulator to regulate the venting of gas through at least one of the gas vents.